EXHIBIT 6

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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Patent Application

Inventor(s): Govinda N. Rajan et al.
Case: G. N. Rajan 5-1 (ALU/125578)
Serial No.: 10/870,217   **Group Art Unit**:   2419
Filed: 06/17/2004   **Confirmation #**:   8666
Examiner: Jagannathan, Melanie
Title: METHOD AND APPARATUS FOR DETERMINATION OF NETWORK TOPOLOGY

MAIL STOP AMENDMENT
COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

SIR:

RESPONSE AMENDMENT

This is in response to the non-final Office Action mailed January 5, 2009. Please reconsider the above-identified patent application as follows.

In the event that an extension of time is required for this response to be considered timely, and a petition therefor does not otherwise accompany this response, any necessary extension of time is hereby petitioned for.

Applicants do not believe that any fee is due in connection with this response. In the event Applicants are incorrect, the Commissioner is authorized to charge any fees due, including extension of time **($130)** and excess claim fees, to counsel's Deposit Account No. 50-4802/ALU/**125578**.

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IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1   1.   (currently amended) A method for managing a communications network,
2   ~~having a plurality of areas, said~~ the method comprising:
3   ~~managing a communications network having a plurality of areas, the~~
4   ~~method comprising:~~
5   adapting a ~~single~~ sniffer to collect information from nodes <u>of a first outer</u>
6   <u>nodal area of the communications network,</u> ~~associated with at least three selected~~
7   ~~areas of said network, wherein each of the at least three selected areas is~~
8   ~~associated with a respective group of nodes, nodes of said respective group of~~
9   ~~nodes sending link status messages only to other nodes of said respective group of~~
10   ~~nodes~~
11   <u>wherein the communications network comprises:</u>
12   <u>an inner nodal area; and</u>
13   <u>a plurality of outer nodal areas connected to the inner nodal</u>
14   <u>area via respective nodes of the inner nodal area,</u>
15   <u>each outer nodal area comprising a plurality of nodes, each</u>
16   <u>of the plurality of nodes configured to send link status messages</u>
17   <u>only to other nodes of the outer nodal area,</u>
18   <u>wherein the adapting comprises:</u>
19   <u>configuring the sniffer as a partition designated inner-</u>
20   <u>nodal-area node of the first outer nodal area;</u>
21   <u>adapting the sniffer to collect information from nodes of a second outer</u>
22   <u>nodal area of the communications network by configuring the sniffer as a partition</u>
23   <u>designated inner-nodal-area node of the second outer nodal area; and</u>

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24   determining a topology of at least a portion of [[said]] the communications

25   network using [[said]] the collected information, the portion of the

26   communications network comprising the first and second outer nodal areas.

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1   2.   (currently amended) The method of claim 1, wherein the step of adapting

2 said single sniffer further comprising: comprises

3   connecting [[said]] the sniffer to a central location of [[said]] the

4   communications network.

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1   3.   (currently amended) The method of claim [[2]] 1, wherein [[said]] the

2 sniffer is a part of an existing network management system of [[said]] the

3 communications network.

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1   4.   (currently amended) The method of claim [[2]] 1, wherein [[said]] the

2 sniffer is a stand-alone device connected independently to [[said]] a central location of

3 [[said]] the communications network.

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1   5.   (currently amended) The method of claim [[2]] 1, further comprising:

2   for each remaining outer nodal area of the plurality of outer nodal areas:

3   adapting the sniffer to collect information from nodes of the

4   remaining outer nodal area by configuring the sniffer as a partition

5   designated inner-nodal-area node of the remaining outer nodal area

6   wherein the step of adapting the single sniffer further comprises:

7   configuring said centrally connected network sniffer as a partition

8 designated node of a selected area.

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1   6.   (currently amended) The method of claim 5, further comprising:

2   determining a topology of the entire communications network using the

3 collected information from each of the plurality of outer nodal areas

4   wherein said at least three selected areas further comprise an L2 area and at least

5 two L1 areas, said method further comprising:

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6   upon selecting an L1 area, configuring said sniffer as a partition

7   designated L2 node of the selected L1 area.

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1   7.   (currently amended) The method of claim 1, wherein [[said]] the collected

2 information from said nodes comprises link state messages sent by nodes of the first and

3 second outer nodal areas.

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1   8.   (currently amended) The method of claim 1, wherein [[said]] the collected

2 information is based upon an existing network protocol.

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1   9.   (currently amended) The method of claim 8, wherein [[said]] the existing

2 network protocol is part of ISO-IEC 10589:2001.

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1   10.   (currently amended) The method of claim 1, wherein the step of

2 determining the topology further comprises:

3   collecting information about [[a]] the first selected inner nodal area;

4   calculating the topology according to [[said]] the first selected inner nodal

5   area;

6   subsequently receiving information about [[a]] the second inner nodal area

7   or more selected areas; and

8   recalculating the topology based upon each new the second inner nodal

9   area.

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1   11.   (currently amended) The method of claim 1, wherein the step of

2 determining the topology further comprises:

3   receiving information from all nodes of all areas in the communications

4   network; and

5   performing a single topology calculation.

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1   12.   (currently amended) The method of claim 1, wherein each node of the

2 inner nodal area that connects a respective outer nodal area to the inner nodal area is a

3   two-level node such that, at one level, the node functions as a member of the inner nodal

4   area and, at another level, the node functions as a member of the respective outer nodal

5   area

6   ~~said at least three selected areas comprise an L2 area and at least two L1 areas,~~

7   ~~wherein L1 areas of said at least two L1 areas are selected by sequentially configuring~~

8   ~~said sniffer as a partition designated L2 node of an L1 area to be selected~~.

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1   13.   (currently amended) A computer readable storage medium containing a

2   program which, when executed, performs an operation for managing a communications

3   network ~~having a plurality of areas~~, [[said]] the operation comprising:

4   adapting a ~~single~~ sniffer to collect information from nodes of a first outer

5   nodal area of the communications network, ~~associated with at least three selected~~

6   ~~areas of said network, wherein each of the at least three selected areas is~~

7   ~~associated with a respective group of nodes, nodes of said respective group of~~

8   ~~nodes sending link status messages only to other nodes of said respective group of~~

9   ~~nodes~~

10   wherein the communications network comprises:

11   an inner nodal area; and

12   a plurality of outer nodal areas connected to the inner nodal

13   area via respective nodes of the inner nodal area,

14   each outer nodal area comprising a plurality of nodes, each

15   of the plurality of nodes configured to send link status messages

16   only to other nodes of the outer nodal area,

17   wherein the adapting comprises:

18   configuring the sniffer as a partition designated inner-

19   nodal-area node of the first outer nodal area;

20   adapting the sniffer to collect information from nodes of a second outer

21   nodal area of the communications network by configuring the sniffer as a partition

22   designated inner-nodal-area node of the second outer nodal area; and

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23   determining a topology of at least a portion of [[said]] the communications

24   network using [[said]] the collected information, the portion of the

25   communications network comprising the first and second outer nodal areas.

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1   14.   (currently amended) The computer readable storage medium of claim 13,

2   wherein the operation step of adapting said single sniffer further comprises:

3   connecting [[said]] the sniffer to a central location of [[said]] the communications

4   network.

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1   15.   (currently amended) The computer readable storage medium of claim 13

2   [[14]], wherein [[said]] the sniffer is a part of an existing network management system of

3   [[said]] the communications network.

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1   16.   (currently amended) The computer readable storage medium of claim 13

2   [[14]], wherein [[said]] the sniffer is a stand-alone device connected independently to

3   [[said]] a central location of [[said]] the communications network.

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1   17.   (currently amended) The computer readable storage medium of claim 14,

2   wherein the operation step of adapting the single sniffer further comprises:

3   for each remaining outer nodal area of the plurality of outer nodal areas:

4   adapting the sniffer to collect information from nodes of the remaining

5   outer nodal area by configuring the sniffer as a partition designated inner-nodal-

6   area node of the remaining outer nodal area

7   configuring said centrally connected network sniffer as a partition

8   designated node of a selected area.

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1   18.   (currently amended) The computer readable storage medium of claim 17,

2   wherein the operation further comprises:

3   determining a topology of the entire communications network using the

4   collected information from each of the plurality of outer nodal areas

5   ~~said at least three selected areas comprise an L2 area and at least two L1 areas,~~

6   ~~said operation further comprising:~~

7   ~~upon selecting an L1 area, configuring said sniffer as a partition~~

8   ~~designated L2 node of the selected L1 area.~~

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1   19.   (currently amended) The computer readable <u>storage</u> medium of claim 13,

2   wherein [[said]] <u>the collected</u> information ~~from said nodes~~ comprises link state messages

3   <u>sent by nodes of the first and second outer nodal areas</u>.

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1   20.   (currently amended) The computer readable <u>storage</u> medium of claim 13,

2   wherein said collected information is based upon an existing network protocol.

1

1   21.   (currently amended) The computer readable <u>storage</u> medium of claim 20,

2   wherein [[said]] <u>the</u> existing network protocol is part of ISO-IEC 10589:2001.

1

1   22.   (currently amended) The computer readable <u>storage</u> medium of claim 13

2   wherein the ~~step of~~ determining the topology further comprises:

3   collecting information about [[a]] <u>the</u> first ~~selected~~ <u>inner nodal</u> area;

4   calculating the topology according to [[said]] <u>the</u> first ~~selected~~ <u>inner nodal</u>

5   area;

6   subsequently receiving information about [[a]] <u>the</u> second <u>inner nodal area</u>

7   ~~or more selected areas~~; and

8   recalculating the topology based upon ~~each new~~ <u>the second inner nodal</u>

9   area.

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1   23.   (currently amended) The computer readable <u>storage</u> medium of claim 13,

2   wherein the ~~step of~~ determining the topology further comprises<u>:</u>

3   receiving information from all nodes of all areas in the <u>communications</u>

4   network<u>;</u> and

5   performing a single topology calculation.

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1   24.   (currently amended) The computer readable <u>storage</u> medium of claim 13,

2 wherein <u>each node of the inner nodal area that connects a respective outer nodal area to</u>

3 <u>the inner nodal area is a two-level node such that, at one level, the node functions as a</u>

4 <u>member of the inner nodal area and, at another level, the node functions as a member of</u>

5 <u>the respective outer nodal area</u>

6 ~~said at least three selected areas comprise an L2 area and at least two L1 areas,~~

7 ~~wherein L1 areas of said at least two L1 areas are selected by sequentially configuring~~

8 ~~said sniffer as a partition designated L2 node of an L1 area to be selected.~~

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1   25.   (currently amended) A communications network comprising:

2   an inner nodal area, comprising a plurality of nodes;

3   two or more outer nodal areas connected to the inner nodal area <u>via respective</u>

4 <u>nodes of the inner nodal area,</u> each of <u>the</u> two or more outer nodal areas comprising a

5 respective plurality of nodes <u>each of the respective plurality of nodes configured to send</u>

6 <u>link status messages only to other nodes of the outer nodal area;</u> and

7   a single sniffer ~~fo r detecting~~ <u>ad apted to detect</u> topology ~~forming~~ infor mation

8 about all nodes in the inner <u>nodal area</u> and <u>the two or more</u> outer nodal areas from a

9 central location in the communications network <u>by being configured sequentially as a</u>

10 <u>partition designated inner-nodal-area node of each of the two or more outer nodal area.</u>

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1   26.   (currently amended) The communications network of claim 25, wherein

2 the <u>single</u> sniffer is connected to the inner nodal area.

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1   27.   (currently amended) The communications network of claim 25, wherein

2 the <u>single</u> sniffer is <u>a</u> part of an existing network management system of [[said]] <u>the</u>

3 <u>communications</u> network.

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1   28.   (currently amended) The communications network of claim 25, wherein

2 the <u>single</u> sniffer is a stand-alone device connected independently to the central location

3 of the <u>communications</u> network.

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1   29.   (currently amended) The communications network of claim 26, wherein

2   the single sniffer is instructed to function as a partition designated node in an existing

3   network protocol.

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1   30.   (original) The communications network of claim 29, wherein the existing

2   network protocol is ISO-IEC 10589:2001.

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1   31.   (currently amended) ~~The method of claim 1, wherein a first group of~~

2   ~~nodes associated with a first area of said at least three selected areas comprises one node~~

3   ~~from each other group of nodes associated with each other area of said at least three~~

4   ~~selected areas~~

5   A method for managing a communications network having an inner nodal area

6   and a plurality of outer nodal areas connected to the inner nodal area via respective nodes

7   of the inner nodal area, the method comprising:

8   adapting a single sniffer to collect information from nodes associated with

9   at least two of the plurality of outer nodal areas of the communications network

10   by configuring the sniffer, sequentially, as a partition designated inner-nodal-area

11   node of each of the at least two outer nodal areas; and

12   determining a topology of at least a portion of the communications

13   network using the collected information, the portion of the communications

14   network comprising the at least two of outer nodal areas.

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1   32.   (currently amended) ~~A method for managing a communications network~~

2   ~~having a plurality of areas, each of said plurality of areas associated with a respective~~

3   ~~group of nodes, said method comprising:~~

4   ~~adapting a single sniffer to collect information from nodes associated with~~

5   ~~at least two selected areas of said network; and~~

6   ~~determining a topology of at least a portion of said network using said~~

7   ~~collected information~~

8   The method of claim 31, wherein the collected information comprises link state

9   messages sent by all nodes of the at least two outer nodal areas.

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R e m a r k s

Claims 1 – 32 are pending in the application.

Claim 1 and 14 – 24 are objected to for formalities.

Claims 1 – 4, 7 – 8, 10 – 11, 13 – 16, 19 – 20, 22 – 23, 25 – 28, and 32 are rejected under 35 U.S.C. §102(e) as being anticipated by Mackie U.S. Patent No. 7,420,929 (hereinafter "Mackie")

Claims 5 – 6, 9, 12, 17 – 18, 21, 24, and 29 – 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mackie in view of Callon et al. U.S. Patent No. 5,251,205 (hereinafter "Callon").

Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., just to avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, because a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an

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independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Claim Objections

Claims 1 and 14 – 24 are objected to for informalities. By this response, Applicants have amended claims 1 and 14 – 24 to incorporate suggestions made by the Examiner in last Office Action with respect to these claims. Accordingly, the Examiner is respectfully requested to withdraw the objections.

Rejection Under 35 U.S.C. §102

Claims 1 – 4, 7-8, 10-11, 13-16, 19-20, 22-23, 25-28, 32 are rejected under 35 U.S.C. §102(e) as being anticipated by Mackie. The rejection is traversed.

Anticipation requires disclosure in a single prior art reference of each and every element of the claimed invention, arranged as in the claim. Mackie does not teach or suggest each and every element of the claimed invention, as arranged in independent claim 1. More specifically, Applicants' claim 1 recites:

> "A method for managing a communications network, the method comprising:
>   adapting a sniffer to collect information from nodes of a first outer nodal area of the communications network,
>   wherein the communications network comprises:
>   an inner nodal area; and
>   a plurality of outer nodal areas connected to the inner nodal area via respective nodes of the inner nodal area,
>   each outer nodal area comprising a plurality of nodes, each of the plurality of nodes configured to send link status messages only to other nodes of the outer nodal area,
>   wherein adapting comprises:
>   configuring the sniffer as a partition designated inner-nodal-area node of the first outer nodal area;
>   adapting the sniffer to collect information from nodes of a second outer nodal area of the communications network by configuring the sniffer

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> as a partition designated inner-nodal-area node of the second outer nodal area; and
>
>> determining a topology of at least a portion of the communications network using the collected information, the portion of the communications network comprising the first and second outer nodal areas"

(emphasis added).   Accordingly, as recited, a single sniffer is adapted to collect information from different outer nodal areas of a communications network by being configured as a partition designated inner-nodal-area node of such outer nodal areas.

The Examiner equates Mackie's network analyzer 11 to Applicants' sniffer.   The network analyzer of Mackie exchanges routing information with routers of autonomous systems to generate and/or maintain set of prefixes for traffic analysis (see Mackie, col. 3, line 55 – col. 4, line 20).   However, nowhere does Mackie disclose that the network analyzer is or may be configured as a partition node of such autonomous systems. Accordingly, Mackie does not teach or suggest each and every element of Applicants' claim 1 as arranged in the claim, and as such, independent claim 1 is not anticipated by Mackie and is allowable under 35 U.S.C. §102.

Independent claims 13, 25, and 32 recite limitations similar to those recited in independent claim 1 that are discussed above.   Therefore, for at least the reasons discussed above, these independent claims also are not anticipated by Mackie and are allowable under 35 U.S.C. §102.

Because all of the dependent claims depending from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Mackie.

Therefore, Applicants' claims 1 – 4, 7 – 8, 10 – 11, 13 – 16, 19 – 20, 22 – 23, 25 – 28, and 32 are allowable over Mackie under 35 U.S.C. §102.   The Examiner is respectfully requested to withdraw the rejection.

Rejection Under 35 U.S.C. §103(a)

Claims 5 – 6, 9, 12, 17 – 18, 21, 24, and 29 – 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Mackie in view of Callon.   The rejection is traversed.

Each of these grounds of rejection applies only to dependent claims, and each is predicated on the validity of the rejection under 35 U.S.C. §102 given Mackie.   Because

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the rejection under 35 U.S.C. §102 given Mackie has been overcome, as described hereinabove, these grounds of rejection cannot be maintained.

Therefore, Applicants' claims 5 – 6, 9, 12, 17 – 18, 21, 24, and 29 – 31 are allowable over Mackie in view of Callon under 35 U.S.C. §103(a). The Examiner is respectfully requested to withdraw the rejection.

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Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 842-8110 x120 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

Dated: 4/28/09

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Electronic Patent Application Fee Transmittal	
Application Number:	10870217
Filing Date:	17-Jun-2004
Title of Invention:	Method and apparatus for determination of network topology
First Named Inventor/Applicant Name:	Govinda N. Rajan
Filer:	Eamon J. Wall/Carol Wilson
Attorney Docket Number:	G. N. RAJAN 5-1 (LCNT/125

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	1251	1	130	130

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**130**

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Application Number:	10870217
International Application Number:	
Confirmation Number:	8666
Title of Invention:	Method and apparatus for determination of network topology
First Named Inventor/Applicant Name:	Govinda N. Rajan
Customer Number:	46363
Filer:	Eamon J. Wall/Carol Wilson
Filer Authorized By:	Eamon J. Wall
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Receipt Date:	28-APR-2009
Filing Date:	17-JUN-2004
Time Stamp:	14:40:13
Application Type:	Utility under 35 USC 111(a)

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RAM confirmation Number	806
Deposit Account	504802
Authorized User	WALL,EAMON
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	
Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	